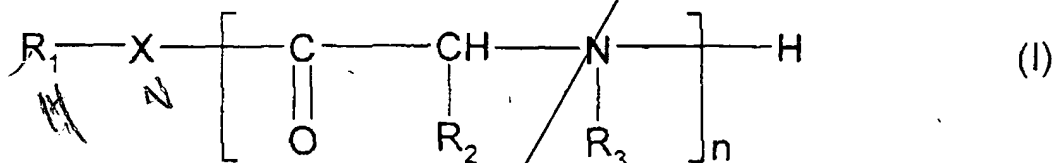


applying to an area in need of said treatment at least one compound chosen from polyamino acid derivatives of formula (I) and salts thereof,

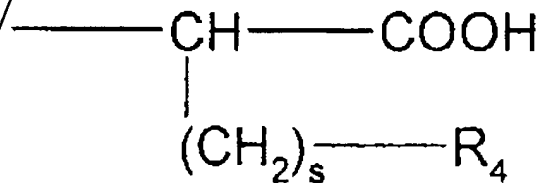


X is chosen from O, S, NH and NR" wherein R" is chosen from saturated and unsaturated, linear and branched C₁₋₆ hydrocarbon-based radicals;

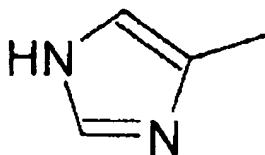
(i) hydrogen;

(ii) linear and branched, saturated and unsaturated C₁₋₄₀ hydrocarbon-based radicals,

(iii) radicals of the formula

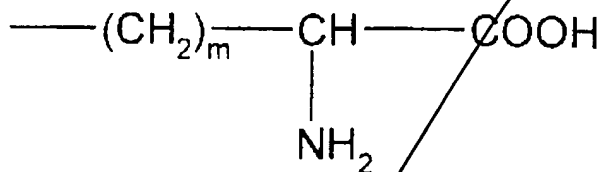


wherein s is a number chosen from 0, 1, 2, 3 and 4; and R₄ is chosen from hydrogen and radicals chosen from -NH₂, -OH, -SH, -CHOHCH₃, -CONH₂, -NH-C(NH₂)=NH, -C₆H₅, -C₆H₄OH and



and;

(iv) radicals of the formula



wherein m is a number chosen from 3, 4 and 5;

R₂ is chosen from hydrogen; saturated and unsaturated, linear and branched C₁₋₈ hydrocarbon-based radicals; and radicals chosen from -CH₂C₆H₅, -CH₂C₆H₄OH, -CH₂OH, -CHOHCH₃, -(CH₂)_t-NH₂, wherein t is a number chosen from 3, 4 and 5;

R₃ is chosen from hydrogen and saturated and unsaturated, linear and branched C₁₋₆ hydrocarbon-based radicals; and

n is a number greater than 1 chosen such that the number average molecular weight of the polyamino acid derivative ranges from 100 to 200 000;

wherein the repeating unit may be identical or different for the same derivative.

2. A process according to claim 1, wherein said microorganisms are *Propionibacterium acnes*.

3. A process according to claim 1, wherein said microorganisms are *Propionibacterium granulosum*.

4. A process according to claim 1, wherein R_1 is chosen from linear and branched, saturated and unsaturated C_{1-40} hydrocarbon-based radicals substituted with at least one hydroxyl radical, at least one radical $-NRR'$, or at least one hydroxyl radical and at least one radical $-NRR'$, wherein R and R', which may be identical or different, are chosen from hydrogen and saturated and unsaturated, linear and branched C_{1-6} hydrocarbon-based radicals.

5. A process according to claim 1, wherein R_1 is chosen from linear and branched, saturated and unsaturated C_{1-40} hydrocarbon-based radicals interrupted with at least one hetero atom chosen from N, O and Si.

6. A process according to claim 1, wherein said at least one compound is administered in the form of a cosmetic composition.

7. A process according to claim 6, wherein the treatment comprises the cosmetic treatment of at least one disorder chosen from seborrheic dermatitis, acne, greasy skin with a tendency towards acne, and hyperseborrhoea.

8. A process according to claim 1, wherein said at least one compound is administered in the form of a pharmaceutical composition.

9. A process according to claim 8, in which the pharmaceutical composition is administered for treating at least one disorder chosen from seborrheic dermatitis, acne, greasy skin with a tendency towards acne and hyperseborrhoea.

10. A process according to claim 1, wherein in said polyamino acid derivatives of formula (I) and salts thereof, at least one of the following definitions apply:

X is chosen from O, S, NH and NR'' , wherein R'' is chosen from saturated and unsaturated, linear and branched C_{1-6} hydrocarbon-based radicals;

R_1 is chosen from linear and branched, saturated and unsaturated C_{8-40} hydrocarbon-based radicals,

R_2 is hydrogen;

R_3 is chosen from saturated, linear and branched C_{1-6} hydrocarbon-based radicals; and

n is chosen from a number ranging from 2 to 100 and a number chosen such that the number average molecular weight of said polyamino acid derivative ranges from 150 to 10,000.

11. A process according to claim 10, wherein R_3 is chosen from methyl and ethyl radicals.

12. A process according to claim 10, wherein R_1 is chosen from linear and branched, saturated and unsaturated C_{8-40} hydrocarbon-based radicals substituted with at least one hydroxyl radical, at least one radical $-NRR'$, or at least one hydroxyl radical and at least one radical $-NRR'$, wherein R and R' , which may be identical or different, are chosen from hydrogen and saturated and unsaturated, linear and branched C_{1-6} hydrocarbon-based radicals.

13. A process according to claim 10, wherein R_1 is chosen from linear and branched, saturated and unsaturated C_{8-40} hydrocarbon-based radicals interrupted with at least one hetero atom chosen from N, O and Si.

14. A process according to claim 14, wherein n is chosen from a number ranging from 2 to 100.

15. A process according to claim 14, wherein n is a number chosen such that the number average molecular weight of said polyamino acid derivative ranges from 150 to 10,000.

16. A process according to claim 10, wherein:

X is chosen from O, S, NH and NR", wherein R" is chosen from saturated and unsaturated, linear and branched C₁₋₆ hydrocarbon-based radicals;

R₁ is chosen from linear and branched, saturated and unsaturated C₈₋₄₀ hydrocarbon-based radicals,

R₂ is hydrogen;

R₃ is chosen from saturated, linear and branched C₁₋₆ hydrocarbon-based radicals;
and

n is chosen from a number ranging from 2 to 100 and a number chosen such that the number average molecular weight of said polyamino acid derivative ranges from 150 to 10,000.

17. A process according to claim 1, wherein in said polyamino acid derivatives of formula (I) and salts thereof, at least one of the following definitions apply:

X is chosen from O, S and NH;

R₁ is chosen from linear and branched, saturated C₁₀₋₂₄ hydrocarbon-based radicals; and linear and branched unsaturated hydrocarbon-based radicals;

R₂ is hydrogen;

R₃ is a methyl radical; and

n is chosen from a number ranging from 4 to 50 and a number chosen such that the number average molecular weight of said polyamino acid derivative ranges from 300 to 8,000.

18. A process according to claim 17, wherein n is chosen from a number ranging from 4 to 50.

19. A process according to claim 17, wherein n is a number chosen such that the number average molecular weight of said polyamino acid derivative ranges from 300 to 8,000.

20. A process according to claim 17, wherein X is NH.

21. A process according to claim 17, wherein R₁ is chosen from linear and branched, saturated C₁₀₋₂₄ hydrocarbon-based radicals substituted with at least one hydroxyl radical.

22. A process according to claim 21, wherein said linear and branched, saturated C₁₀₋₂₄ hydrocarbon-based radicals are substituted with 1, 2, 3, or 4 hydroxyl radicals.

23. A process according to claim 17, wherein R₁ is chosen from linear and branched unsaturated hydrocarbon-based radicals substituted with at least one hydroxyl radical.

24. A process according to claim 1, wherein:

X is chosen from O, S and NH;

R₁ is chosen from linear and branched, saturated C₁₀₋₂₄ hydrocarbon-based radicals; and linear and branched unsaturated hydrocarbon-based radicals;

R₂ is hydrogen;

R₃ is a methyl radical; and

n is chosen from a number ranging from 4 to 50 and a number chosen such that the number average molecular weight of said polyamino acid derivative ranges from 300 to 8,000.

25. A process according to claim 1, wherein said at least one compound is present in said composition in an amount ranging from 0.001% to 30% by weight, relative to the total weight of the composition.

26. A process according to claim 25, wherein said at least one compound is present in said composition in an amount ranging from 0.01% to 15% by weight, relative to the total weight of the composition.

27. A process according to claim 26, wherein said at least one compound is present in said composition in an amount ranging from 0.5% to 5% by weight, relative to the total weight of the composition.

28. A process according to claim 10, wherein said at least one compound is applied in the form of a composition chosen from a cosmetic composition and a pharmaceutical composition.

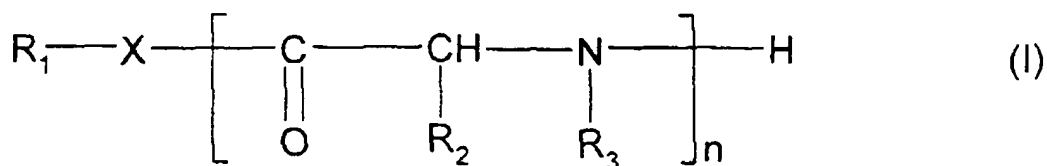
29. A process according to claim 17, wherein said at least one compound is applied in the form of a composition chosen from a cosmetic composition and a pharmaceutical composition.

30. A process according to claim 1, wherein said at least one compound is applied to at least one area chosen from the skin and the scalp.

31. A process for the manufacture of a composition for treatment of at least one condition chosen from seborrhoea of the skin and scalp, disorders associated with seborrhoea, and disorders associated with microorganisms of the genus

Propionibacterium, said process comprising:

including in said composition at least one polyamino acid derivative chosen from formula (I) and salts thereof ,

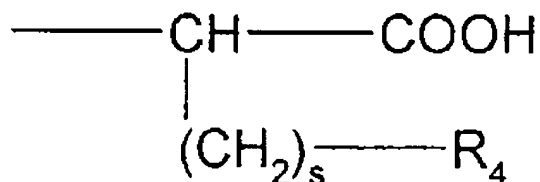


in which:

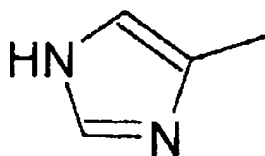
X is chosen from O, S, NH and NR" with R" is chosen from saturated and unsaturated, linear and branched C₁₋₆ hydrocarbon-based radicals;

R₁ is chosen from:

- (i) hydrogen;
- (ii) linear and branched, saturated and unsaturated C₁₋₄₀ hydrocarbon-based radicals,
- (iii) radicals of the formula

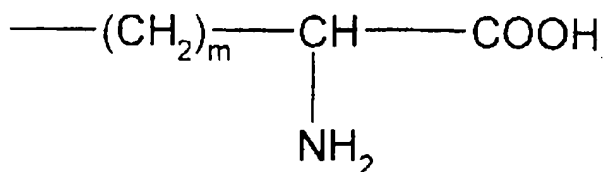


wherein s is a number chosen from 0, 1, 2, 3 and 4; and R₄ is chosen from hydrogen and radicals chosen from -NH₂, -OH, -SH, -CHOHCH₃, -CONH₂, -NH-C(NH₂)=NH, -C₆H₅, -C₆H₄OH and



and;

- (iv) radicals of the formula



wherein m is a number chosen from 3, 4 and 5;

- R₂ is chosen from hydrogen; saturated and unsaturated, linear and branched C₁₋₈ hydrocarbon-based radicals; and radicals chosen from -CH₂C₆H₅, -CH₂C₆H₄OH, -CH₂OH, -CHOHCH₃, -(CH₂)_t-NH₂ wherein t is a number chosen from 3, 4 and 5;

R₃ is chosen from hydrogen and saturated and unsaturated, linear and branched C₁₋₆ hydrocarbon-based radicals; and

n is a number greater than 1 chosen such that the number average molecular weight of the polyamino acid derivative ranges from 100 to 200 000;

wherein the repeating unit may be identical or different for the same derivative.

32. A process according to claim 31, wherein said microorganisms are *Propionibacterium acnes*.

33. A process according to claim 31, wherein said microorganisms are *Propionibacterium granulosum*.

34. A process according to claim 31, wherein R_1 is chosen from linear and branched, saturated and unsaturated C_{1-40} hydrocarbon-based radicals substituted with at least one hydroxyl radical, at least one radical -NRR', or at least one hydroxyl radical and at least one radical -NRR', wherein R and R', which may be identical or different, are chosen from hydrogen and saturated and unsaturated, linear and branched C_{1-6} hydrocarbon-based radicals.

35. A process according to claim 31, wherein R_1 is chosen from linear and branched, saturated and unsaturated C_{1-40} hydrocarbon-based radicals interrupted with at least one hetero atom chosen from N, O and Si.

36. A process according to claim 31, wherein in said polyamino acid derivatives of formula (I) and salts thereof, at least one of the following definitions apply:

X is chosen from O, S, NH and NR'' , wherein R'' is chosen from saturated and unsaturated, linear and branched C_{1-6} hydrocarbon-based radicals;

R_1 is chosen from linear and branched, saturated and unsaturated C_{8-40} hydrocarbon-based radicals,

R_2 is hydrogen;

R_3 is chosen from saturated, linear and branched C_{1-6} hydrocarbon-based radicals; and

n is chosen from a number ranging from 2 to 100 and a number chosen such that the number average molecular weight of said polyamino acid derivative ranges from 150 to 10,000.

37. A process according to claim 36, wherein R_3 is chosen from methyl and ethyl radicals.

38. A process according to claim 36, wherein R_1 is chosen from linear and branched, saturated and unsaturated C_{8-40} hydrocarbon-based radicals substituted with at least one hydroxyl radical, at least one radical $-NRR'$, or at least one hydroxyl radical and at least one radical $-NRR'$, wherein R and R' , which may be identical or different, are chosen from hydrogen and saturated and unsaturated, linear and branched C_{1-6} hydrocarbon-based radicals.

39. A process according to claim 36, wherein R_1 is chosen from linear and branched, saturated and unsaturated C_{8-40} hydrocarbon-based radicals interrupted with at least one hetero atom chosen from N, O and Si.

40. A process according to claim 36, wherein n is chosen from a number ranging from 2 to 100.

41. A process according to claim 36, wherein n is a number chosen such that the number average molecular weight of said polyamino acid derivative ranges from 150 to 10,000.

42. A process according to claim 36, wherein:

X is chosen from O, S, NH and NR'' , wherein R'' is chosen from saturated and unsaturated, linear and branched C_{1-6} hydrocarbon-based radicals;

R_1 is chosen from linear and branched, saturated and unsaturated C_{8-40} hydrocarbon-based radicals,

R_2 is hydrogen;

R_3 is chosen from saturated, linear and branched C_{1-6} hydrocarbon-based radicals;
and

n is chosen from a number ranging from 2 to 100 and a number chosen such that the number average molecular weight of said polyamino acid derivative ranges from 150 to 10,000.

43. A process according to claim 31, wherein in said polyamino acid derivatives of formula (I) and salts thereof, at least one of the following definitions apply:

X is chosen from O, S and NH;

R_1 is chosen from linear and branched, saturated C_{10-24} hydrocarbon-based radicals; and linear and branched unsaturated hydrocarbon-based radicals;

R_2 is hydrogen;

R_3 is a methyl radical; and

n is chosen from a number ranging from 4 to 50 and a number chosen such that the number average molecular weight of said polyamino acid derivative ranges from 300 to 8,000.

44. A process according to claim 43, wherein n is chosen from a number ranging from 4 to 50.

45. A process according to claim 43, wherein n is a number chosen such that the number average molecular weight of said polyamino acid derivative ranges from 300 to 8,000.

46. A process according to claim 43, wherein X is NH .

47. A process according to claim 43, wherein R_1 is chosen from linear and branched, saturated C_{10-24} hydrocarbon-based radicals substituted with at least one hydroxyl radical.

48. A process according to claim 47, wherein said linear and branched, saturated C_{10-24} hydrocarbon-based radicals are substituted with 1, 2, 3, or 4 hydroxyl radicals.

49. A process according to claim 43, wherein R_1 is chosen from linear and branched unsaturated hydrocarbon-based radicals substituted with at least one hydroxyl radical.

50. A process according to claim 31, wherein said at least one polyamino acid derivative is present in said composition in an amount ranging from 0.001% to 30% by weight, relative to the total weight of the composition.

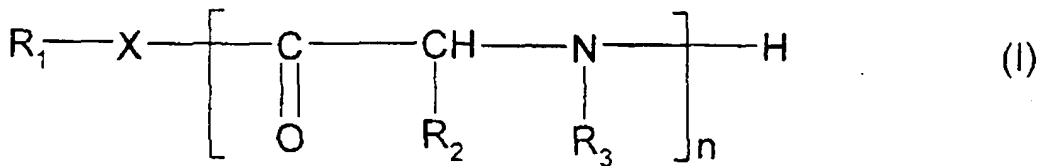
51. A process according to claim 50, wherein said at least one polyamino acid derivative is present in said composition in an amount ranging from 0.01% to 15% by weight, relative to the total weight of the composition.

52. A process according to claim 51, wherein said at least one polyamino acid derivative is present in said composition in an amount ranging from 0.5% to 5% by weight, relative to the total weight of the composition.

53. A process according to claim 31, wherein said composition is a pharmaceutical composition.

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54. An anti-seborrhoeic composition comprising,
a physiologically acceptable medium; and
an effective amount of at least one polyamino acid derivative of formula (I) and salts thereof,

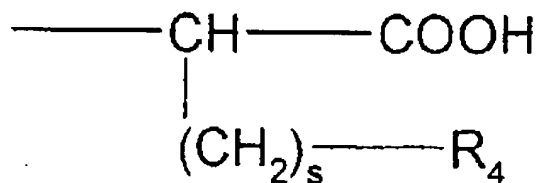


in which:

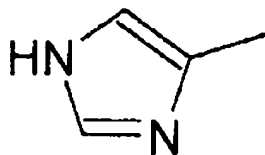
X is chosen from O, S, NH and NR" wherein R" is chosen from saturated and unsaturated, linear and branched C₁₋₆ hydrocarbon-based radicals;

R₁ is chosen from:

- (i) hydrogen;
- (ii) linear and branched, saturated and unsaturated C₁₋₄₀ hydrocarbon-based radicals,
- (iii) radicals of the formula

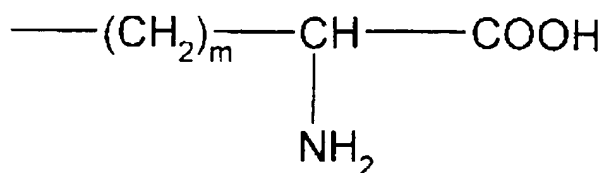


wherein s is a number chosen from 0, 1, 2, 3 and 4; and R₄ is chosen from hydrogen and radicals chosen from -NH₂, -OH, -SH, -CHOHCH₃, -CONH₂, -NH-C(NH₂)=NH, -C₆H₅, -C₆H₄OH and



and;

(iv) radicals of the formula



wherein m is a number chosen from 3, 4 and 5;

R₂ is chosen from hydrogen; saturated and unsaturated, linear and branched C₁₋₈ hydrocarbon-based radicals; and radicals chosen from -CH₂C₆H₅, -CH₂C₆H₄OH, -CH₂OH, -CHOHCH₃, -(CH₂)_t-NH₂ wherein t is a number chosen from 3, 4 and 5;

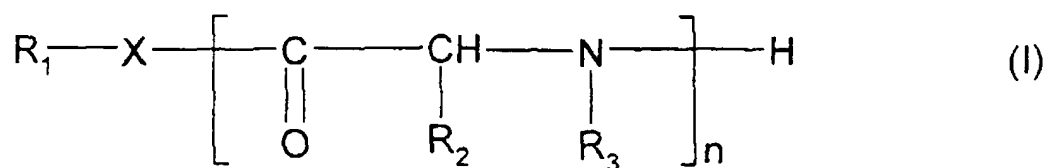
R₃ is chosen from hydrogen and saturated and unsaturated, linear and branched C₁₋₆ hydrocarbon-based radicals; and

n is a number greater than 1 chosen such that the number average molecular weight of the polyamino acid derivative ranges from 100 to 200 000;

wherein the repeating unit may be identical or different for the same derivative.

55. An anti-seborrhoeic composition according to claim 54, wherein said composition is an anti-acne composition.

56. An anti-bacterial composition comprising,
a physiologically acceptable medium; and
an effective amount of at least one polyamino acid derivative of formula (I) and salts thereof for treating bacteria,

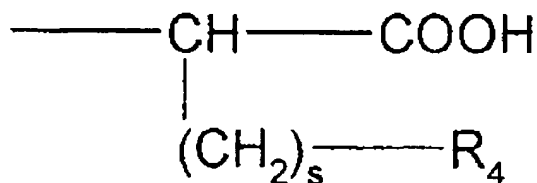


in which:

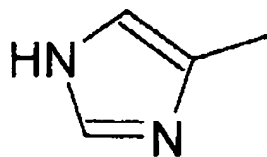
X is chosen from O, S, NH and NR" wherein R" is chosen from saturated and unsaturated, linear and branched C₁₋₆ hydrocarbon-based radicals;

R₁ is chosen from:

- (i) hydrogen;
- (ii) linear and branched, saturated and unsaturated C₁₋₄₀ hydrocarbon-based radicals,
- (iii) radicals of the formula

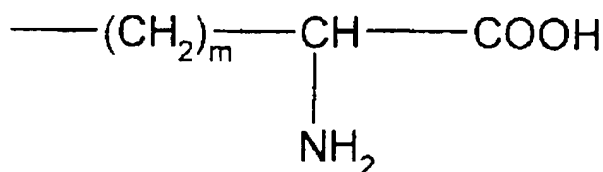


wherein s is a number chosen from 0, 1, 2, 3 and 4; and R₄ is chosen from hydrogen and radicals chosen from -NH₂, -OH, -SH, -CHOHCH₃, -CONH₂, -NH-C(NH₂)=NH, -C₆H₅, -C₆H₄OH and



and;

(iv) radicals of the formula



wherein m is a number chosen from 3, 4 and 5;

R_2 is chosen from hydrogen; saturated and unsaturated, linear and branched C_{1-8} hydrocarbon-based radicals; and radicals chosen from $-\text{CH}_2\text{C}_6\text{H}_5$, $-\text{CH}_2\text{C}_6\text{H}_4\text{OH}$, $-\text{CH}_2\text{OH}$, $-\text{CHOHCH}_3$, $-(\text{CH}_2)_t\text{NH}_2$ wherein t is a number chosen from 3, 4 and 5;

R_3 is chosen from hydrogen and saturated and unsaturated, linear and branched C_{1-6} hydrocarbon-based radicals; and

n is a number greater than 1 chosen such that the number average molecular weight of the polyamino acid derivative ranges from 100 to 200 000;

wherein the repeating unit may be identical or different for the same derivative.

57. An anti-bacterial composition according to claim 56, wherein said composition is an anti-acne composition.

58. An antibacterial composition according to claim 55, wherein the bacteria is of the genus *Propionibacterium*.

59. An antibacterial composition according to claim 58, wherein the bacteria is at least one of *Propionibacterium acnes* and *Propionibacterium granulosum*.

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